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EXAMINER

FOX, DAVID T

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/299,426

Applicant(s)

JOHNSTON ET AL.

Examiner

David T. Fox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/24/99, 7/8/99, 2/20/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 1999 and 20 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7
4) ☐ Interview Summary (PTO-413) Paper No(s) _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

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PTO-326 (Rev. 04-01)

Office Action Summary

Part of Paper No. 15

Continuation of Disposition of Claims: Claims pending in the application are 1-29,31-59,61-64,66,69,70,72,73,77,78,80-89,105-112,114,117,118,120,121,125,126,131,132 and 134-153.

Continuation of Disposition of Claims: Claims rejected are 1-29,31-59,61-64,66,69,70,72,73,77,78,80-89,105-112,114,117,118,120,121,125,126,131,132 and 134-153.

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1638.

Receipt on 20 February 2001 of preliminary amendments intended for abandoned parent applications, as mentioned by Applicant on page 24 of the preliminary amendment of 20 February 2001 in the instant reissue application, is acknowledged. Since the other applications are abandoned, entry of amendments thereto is not appropriate.

The instant reissue application should be reviewed for errors. Errors appear, for example, in claims 88-89 and 107-108 which are lacking periods at the end of the claims.

Applicant is requested to cite all related reissues, namely application Serial Nos. 09/788,845 and 09/788,846, on page 1 of the specification, top paragraph.

The original patent, or an affidavit or declaration as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

Applicant is reminded of the continuing obligation under 37 CFR 1.178(b), to timely apprise the Office of any prior or concurrent proceeding in which Patent No. 5,840,481 is or was involved. These proceedings would include interferences, reissues, reexaminations, and litigation.

Applicant is further reminded of the continuing obligation under 37 CFR 1.56, to timely apprise the Office of any information which is material to patentability of the claims under consideration in this reissue application.

These obligations rest with each individual associated with the filing and prosecution of this application for reissue. See also MPEP §§ 1404, 1442.01 and 1442.04.

Applicant is notified that any subsequent amendment to the specification and/or claims must comply with 37 CFR 1.173(b).

Claims 1-29, 31-59, 61-64, 66, 69-70, 72-73, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132 and 134-153 are rejected under 35 USC 251 as lacking basis for reissue, since the original patent has expired. See 35 USC 251 which states that "the Director shall...reissue the patent...for the unexpired part of the term of the original patent". See also *In re Morgan*, 990 F.2d 1230, 26 USPQ2d 1392 (Fed. Cir. 1983), which holds that reissue applications can only be issued for unexpired patents.

U.S. Patent No. 5,840,481 expired on 26 December 2002 due to nonpayment of maintenance fees under 37 CFR 1.362. To reinstate the original patent, a petition under 37 CFR 1.378 for retroactive payment of maintenance fees must be filed and granted.

The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

The reissue declaration of 24 June 1999 states that claims 122-133 were added to address the error that Patentee erroneously limited their claims to require the step of

incubation of transformed plant cells with a virus in order to select for transformants (see, e.g., page 2 of the reissue declaration). Claims 122 and 128 were characterized as corresponding to claims 1 and 3 of U.S. Patent No. 5,840,481, but without the limitation of the viral incubation steps d) and e) of the patent claims. Claims 123-127 and 129-133 depended upon claims 122 and 128, respectively. The Preliminary Amendment of 08 July 1999 cancelled claims 122 and 128, but presented new claims 137 and 138 which generally correspond to claims 122 and 128 in being similar to claims 1 and 3 of the patent, and in their omission of a viral incubation step. Pending claims 125-126 and 132-133 depend upon claims 137 and 138, respectively. Thus, claims 125-126, 132-133 and 137-138 are intended to correct Patentee's error of claiming less. Patentee had a right to claim, as stated in the original reissue declaration.

The preliminary amendment filed 08 July 1999 presented new claims 134-138 drawn to a coding sequence which encodes a viral protein or polypeptide *other than a coat protein or polypeptide*; and amended claims 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126 and 131-132 to depend thereon (emphasis added). The preliminary amendment of 08 July 1999 also presented new claims 139-153 drawn to a DNA encoding either an antisense RNA corresponding to a viral gene or a sense transcript of a viral coat protein.

The preliminary amendment filed 20 February 2001 added Figures 2-7 and substantially amended the specification to incorporate extensive portions of non-patent literature.

See paragraph (b)(1) of 37 CFR 1.175, which states that a supplemental reissue oath or declaration must be submitted for every error which was not covered by the original reissue oath or declaration.

Claims 1-29, 31-59, 61-64, 66, 69-70, 72-73, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132, and 134-153 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

In accordance with 37 CFR 1.175(b)(1), a supplemental reissue oath/declaration under 37 CFR 1.175(b)(1) must be received before this reissue application can be allowed.

Receipt of an appropriate supplemental oath/declaration under 37 CFR 1.175(b)(1) will overcome this rejection under 35 U.S.C. 251. An example of acceptable language to be used in the supplemental oath/declaration is as follows:

"Every error in the patent which was corrected in the present reissue application, and is not covered by a prior oath/declaration submitted in this application, arose without any deceptive intention on the part of the applicant."

The reissue specification is objected to for the following reasons:

The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the

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applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

The attempt to incorporate subject matter into this application by reference to non-patent publications is improper because essential material may not be incorporated by reference to such publications. The preliminary amendments to the specification filed with the reissue application are noted. These amendments are objected to because they do not clearly state from which references the appended material is derived. Furthermore, an affidavit should be provided which states that the amendatory material consists of the same material incorporated by reference, as stated above.

Claims 33, 42-44, 46, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132 and 134-138 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material which is not supported by the prior patent is as follows:

claims 33, 42-44 and 46 drawn to *tobacco* cells and *tobacco* plants;
claims 89 and 108 drawn to *monocotyledonous* plant cells and
monocotyledonous plants; and

claims 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132 and 134-138 drawn to a coding sequence which encodes a viral protein or polypeptide *other than a coat protein or polypeptide* (emphasis added).

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There is no literal support in the specification or originally filed claims for any of these concepts.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 33, 42-44, 46, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-125, 131-132 and 134-138 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 33, 42-44 and 46 are drawn to *tobacco* cells and *tobacco* plants. Claims 89 and 108 are drawn to *monocotyledonous* plant cells and *monocotyledonous* plants. Claims 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132 and 134-138 are drawn to a coding sequence which encodes a viral protein or polypeptide *other than a coat protein or polypeptide* (emphasis added).

There is no literal support in the specification or originally filed claims for any of these concepts. Accordingly, the newly submitted and newly amended claims are drawn to NEW MATTER.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2, 125-126, 137 and 148-149 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. 09/788,845. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to utilize the method for conferring viral resistance to a bacterium including *E. coli* comprising transforming said bacterium with a gene or gene fragment encoding a viral protein including a viral replicase from Q-beta virus, and the resultant transformed bacterium, as claimed in the copending application; to obtain the method for conferring viral resistance to a

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bacterium including E. coli comprising transforming said bacterium with a gene or gene fragment encoding a viral protein including a viral replicase, as claimed in the instant application. The claims are coextensive. Choice of available viral replicase gene from available bacteriophage would have been the optimization of process parameters, as would have choice of available bacterial species to be transformed.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-2, 125-126, 137, and 148-149 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/788,846. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to utilize the method for conferring viral resistance to a bacterium including E. coli comprising transforming said bacterium with an expression vector comprising a gene or gene fragment encoding a viral protein including a viral replicase, a protein comprising a replicase binding site, or a coat protein, including a gene from an RNA virus, as claimed in the copending application; to obtain the methods for obtaining virus-resistant host cells including bacteria via transforming said bacteria with a viral coding sequence in sense orientation, including a viral replicase coding sequence, a sequence which encodes a replicase binding site, or a coat protein-encoding sequence, including a gene from an RNA virus, wherein the viral coding sequence may be inserted into an expression vector, as claimed in the instant application. The claims are coextensive. Choice of available

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bacterial species to be transformed, using known methods, would have been the optimization of process parameters, as would have insertion of the replicase gene into a plasmid vector or directly into the bacterial chromosome.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 3-29, 31-59, 61-64, 66, 69-70, 72-73, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 134-136, 138-147 and 151-153 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-28 of copending Application No. 09/788,846. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to utilize the method for conferring viral resistance to plant cells and plant tissue comprising transforming said plant cells or plant tissue with an expression vector comprising a gene or gene fragment in sense or antisense orientation from an RNA virus encoding a viral protein including a viral replicase, a protein comprising a replicase binding site, or a coat protein, as claimed in the copending application; to obtain the methods for obtaining virus-resistant plant cells or plant tissue via transforming said plant cells with an expression vector comprising a viral coding sequence in sense or antisense orientation, including a viral replicase coding sequence, a sequence which encodes a replicase binding site, or a coat protein-encoding sequence, including a gene from an RNA virus, wherein the transformation may be effected by the bacterium *Agrobacterium*, as well as plant cells or bacterial cells containing the plant transformation vector, as well as the transformed

plants regenerated from said transformed plant cells, as claimed in the instant application. The claims are coextensive.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Claims 1-4, 8-29, 31-38, 61-64, 66, 69-70, 72-73, 77-78, 80-89, 105-112, 114, 117-118, 120-121, 125-126, 131-132, 134-140, 142-143, 145-146, 148-149, and 151-152 are rejected under 35 U.S.C. 102(g) as being anticipated by Beachy et al.

The claims are drawn to a method of conferring viral resistance to plant cells, comprising transforming said plant cells with an expression vector comprising a gene encoding a viral protein including a coat protein, operably linked in sense orientation to a plant-functional promoter. The claims are also drawn to plant transformation vectors including *Agrobacterium*-derived vectors, and the resultant transformed plant cells and plants.

As stated on page 19 of the Decision of 30 July 2001 regarding Interference No. 104,286, this subject matter was awarded to Beachy et al. Note that page 19 of the

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Decision has a typographical error in listing an incorrect Serial No. for the Beachy et al application. See page 1 of that Decision for the correct Serial No.

Claims 5-7, 39-59, 139, 141-142, 144-145, 147-148, 150-151 and 153 are rejected under 35 U.S.C. 102(g) as being anticipated by McCormick et al.

The claims are drawn to a method for conferring viral resistance to plant cells, comprising transforming said plant cells with an expression vector comprising a viral gene operably linked in antisense orientation to a plant-functional promoter. The claims are also drawn to plant transformation vectors including *Agrobacterium*-derived vectors, and the resultant transformed plant cells and plants.

As stated on page 10 of the Decision mailed 06 July 2001 in Interference No. 104,400, this subject matter was awarded to McCormick et al.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached on (703) 306-3218. The fax phone number for this Group is (703) 872-9306. The after final fax phone number is (703) 872-9307.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

August 27, 2003

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180-1638

